

SEQUENCE LISTING

<110> SYRRX, INC.
 <120> CRYSTALLIZATION OF CATHEPSIN S
 <130> SYR-CATS-5002-C1
 <140> Not Yet Assigned
 <141> 2003-08-22
 <150> US 60/405,423
 <151> 2002-08-23
 <160> 4
 <170> PatentIn version 3.1
 <210> 1
 <211> 331
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> Amino acid sequence for full-length human wild type Cathepsin S
 <222> (1)..(331)
 <223>
 <220>
 <221> Amino acid sequence for full-length human wild type Cathepsin S
 <222> (1)..(331)
 <223> Residues 115-331 comprise the catalytic domain
 <300>
 <308> AF230097
 <309> 2002-04-08
 <313> (1)..(331)
 <400> 1
 Met Lys Arg Leu Val Cys Val Leu Leu Val Cys Ser Ser Ala Val Ala
 1 5 10 15
 Gln Leu His Lys Asp Pro Thr Leu Asp His His Trp His Leu Trp Lys
 20 25 30
 Lys Thr Tyr Gly Lys Gln Tyr Lys Glu Lys Asn Glu Glu Ala Val Arg
 35 40 45
 Arg Leu Ile Trp Glu Lys Asn Leu Lys Phe Val Met Leu His Asn Leu
 50 55 60

Glu	His	Ser	Met	Gly	Met	His	Ser	Tyr	Asp	Leu	Gly	Met	Asn	His	Leu	65	70	75	80
Gly	Asp	Met	Thr	Ser	Glu	Glu	Val	Met	Ser	Leu	Met	Ser	Ser	Leu	Arg	85	90	95	
Val	Pro	Ser	Gln	Trp	Gln	Arg	Asn	Ile	Thr	Tyr	Lys	Ser	Asn	Pro	Asn	100	105	110	
Arg	Ile	Leu	Pro	Asp	Ser	Val	Asp	Trp	Arg	Glu	Lys	Gly	Cys	Val	Thr	115	120	125	
Glu	Val	Lys	Tyr	Gln	Gly	Ser	Cys	Gly	Ala	Cys	Trp	Ala	Phe	Ser	Ala	130	135	140	
Val	Gly	Ala	Leu	Glu	Ala	Gln	Leu	Lys	Leu	Lys	Thr	Gly	Lys	Leu	Val	145	150	155	160
Ser	Leu	Ser	Ala	Gln	Asn	Leu	Val	Asp	Cys	Ser	Thr	Glu	Lys	Tyr	Gly	165	170	175	
Asn	Lys	Gly	Cys	Asn	Gly	Gly	Phe	Met	Thr	Thr	Ala	Phe	Gln	Tyr	Ile	180	185	190	
Ile	Asp	Asn	Lys	Gly	Ile	Asp	Ser	Asp	Ala	Ser	Tyr	Pro	Tyr	Lys	Ala	195	200	205	
Met	Asp	Leu	Lys	Cys	Gln	Tyr	Asp	Ser	Lys	Tyr	Arg	Ala	Ala	Thr	Cys	210	215	220	
Ser	Lys	Tyr	Thr	Glu	Leu	Pro	Tyr	Gly	Arg	Glu	Asp	Val	Leu	Lys	Glu	225	230	235	240
Ala	Val	Ala	Asn	Lys	Gly	Pro	Val	Ser	Val	Gly	Val	Asp	Ala	Arg	His	245	250	255	
Pro	Ser	Phe	Phe	Leu	Tyr	Arg	Ser	Gly	Val	Tyr	Tyr	Glu	Pro	Ser	Cys	260	265	270	
Thr	Gln	Asn	Val	Asn	His	Gly	Val	Leu	Val	Val	Gly	Tyr	Gly	Asp	Leu	275	280	285	
Asn	Gly	Lys	Glu	Tyr	Trp	Leu	Val	Lys	Asn	Ser	Trp	Gly	His	Asn	Phe				

290

295

300

Gly Glu Glu Gly Tyr Ile Arg Met Ala Arg Asn Lys Gly Asn His Cys
 305 310 315 320

Gly Ile Ala Ser Phe Pro Ser Tyr Pro Glu Ile
 325 330

<210> 2
 <211> 576
 <212> DNA
 <213> Homo sapiens

<220>
 <221> Human cDNA sequence for Cathepsin S
 <222> (1)..(576)
 <223>

<400> 2
 gctttcagtg ctgtgggggc cctggaagca cagctgaagc tgaaaacagg aaagctggtg 60
 tctctcagtg ccagaaacct ggtggattgc tcaactgaaa aatatggaaa caaaggctgc 120
 aatggtggct tcatgacaac ggctttccag tacatcattg ataacaaggg catcgactca 180
 gacgcttcct atccctacaa agccatggat ctgaaatgtc aatatgactc aaaatatcgt 240
 gctgccacat gttcaaagta cactgaactt ctttatggca gagaagatgt cctgaaagaa 300
 gctgtggcca ataaaggccc agtgtctgtt ggtgtagatg cgcgtcatcc ttctttcttc 360
 ctctacagaa gtgggtgtcta ctatgaacca tcctgtactc agaatgtgaa tcatgggtga 420
 cttgtgggtg gctatgggtga tcttaatggg aaagaatact ggcttgtgaa aaacagctgg 480
 ggccacaact ttggtgaaga aggatattatt cggatggcaa gaaataaagg aaatcattgt 540
 gggattgcta gctttccctc ttaccagaa atctag 576

<210> 3
 <211> 225
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Amino acid sequence for residues 114-331 of Cathepsin S
 <222> (1)..(225)
 <223> with the addition of a C-terminal Glycine and six histidine tag

<400> 3

Ile Leu Pro Asp Ser Val Asp Trp Arg Glu Lys Gly Cys Val Thr Glu

1	5	10	15
Val Lys Tyr Gln Gly Ser Cys Gly Ala Cys Trp Ala Phe Ser Ala Val	20	25	30
Gly Ala Leu Glu Ala Gln Leu Lys Leu Lys Thr Gly Lys Leu Val Ser	35	40	45
Leu Ser Ala Gln Asn Leu Val Asp Cys Ser Thr Glu Lys Tyr Gly Asn	50	55	60
Lys Gly Cys Asn Gly Gly Phe Met Thr Thr Ala Phe Gln Tyr Ile Ile	65	70	75
Asp Asn Lys Gly Ile Asp Ser Asp Ala Ser Tyr Pro Tyr Lys Ala Met	85	90	95
Asp Gln Lys Cys Gln Tyr Asp Ser Lys Tyr Arg Ala Ala Thr Cys Ser	100	105	110
Lys Tyr Thr Glu Leu Pro Tyr Gly Arg Glu Asp Val Leu Lys Glu Ala	115	120	125
Val Ala Asn Lys Gly Pro Val Ser Val Gly Val Asp Ala Arg His Pro	130	135	140
Ser Phe Phe Leu Tyr Arg Ser Gly Val Tyr Tyr Glu Pro Ser Cys Thr	145	150	155
Gln Asn Val Asn His Gly Val Leu Val Val Gly Tyr Gly Asp Leu Asn	165	170	175
Gly Lys Glu Tyr Trp Leu Val Lys Asn Ser Trp Gly His Asn Phe Gly	180	185	190
Glu Glu Gly Tyr Ile Arg Met Ala Arg Asn Lys Gly Asn His Cys Gly	195	200	205
Ile Ala Ser Phe Pro Ser Tyr Pro Glu Ile Gly His His His His His	210	215	220
His			
225			

<210> 4
<211> 340
<212> PRT
<213> Homo sapiens

<220>
<221> Amino acid sequence for residues 1-331 of Cathepsin S
<222> (3)..(333)
<223>

<220>
<221> Amino acid sequence for residues 1-331 of Cathepsin S
<222> (3)..(333)
<223> Additional N-terminal Methionine-Proline and a C-terminal Glycine
- 6x-histidine tag

<400> 4

Met Pro Met Lys Arg Leu Val Cys Val Leu Leu Val Cys Ser Ser Ala
1 5 10 15

Val Ala Gln Leu His Lys Asp Pro Thr Leu Asp His His Trp His Leu
20 25 30

Trp Lys Lys Thr Tyr Gly Lys Gln Tyr Lys Glu Lys Asn Glu Glu Ala
35 40 45

Val Arg Arg Leu Ile Trp Glu Lys Asn Leu Lys Phe Val Met Leu His
50 55 60

Asn Leu Glu His Ser Met Gly Met His Ser Tyr Asp Leu Gly Met Asn
65 70 75 80

His Leu Gly Asp Met Thr Ser Glu Glu Val Met Ser Leu Met Ser Ser
85 90 95

Leu Arg Val Pro Ser Gln Trp Gln Arg Asn Ile Thr Tyr Lys Ser Asn
100 105 110

Pro Asn Arg Ile Leu Pro Asp Ser Val Asp Trp Arg Glu Lys Gly Cys
115 120 125

Val Thr Glu Val Lys Tyr Gln Gly Ser Cys Gly Ala Cys Trp Ala Phe
130 135 140

Ser Ala Val Gly Ala Leu Glu Ala Gln Leu Lys Leu Lys Thr Gly Lys
145 150 155 160

Leu Val Ser Leu Ser Ala Gln Asn Leu Val Asp Cys Ser Thr Glu Lys
165 170 175

Tyr Gly Asn Lys Gly Cys Asn Gly Gly Phe Met Thr Thr Ala Phe Gln
180 185 190

Tyr Ile Ile Asp Asn Lys Gly Ile Asp Ser Asp Ala Ser Tyr Pro Tyr
195 200 205

Lys Ala Met Asp Gln Lys Cys Gln Tyr Asp Ser Lys Tyr Arg Ala Ala
210 215 220

Thr Cys Ser Lys Tyr Thr Glu Leu Pro Tyr Gly Arg Glu Asp Val Leu
225 230 235 240

Lys Glu Ala Val Ala Asn Lys Gly Pro Val Ser Val Gly Val Asp Ala
245 250 255

Arg His Pro Ser Phe Phe Leu Tyr Arg Ser Gly Val Tyr Tyr Glu Pro
260 265 270

Ser Cys Thr Gln Asn Val Asn His Gly Val Leu Val Val Gly Tyr Gly
275 280 285

Asp Leu Asn Gly Lys Glu Tyr Trp Leu Val Lys Asn Ser Trp Gly His
290 295 300

Asn Phe Gly Glu Glu Gly Tyr Ile Arg Met Ala Arg Asn Lys Gly Asn
305 310 315 320

His Cys Gly Ile Ala Ser Phe Pro Ser Tyr Pro Glu Ile Gly His His
325 330 335

His His His His
340